Index to Volume 12

How to Use This Index

THIS Index is of similar form to the Cumulative Index of this journal, published in November, 1939, and is composed of two main divisions: The Author Index and the Subject Index.

The Subject Index to Volume 12 of *The Journal of the Acoustical Society of America* lists the titles of all the papers and abstracts under ten section headings as follows: 1, Acoustical Society of America; 2, Architectural Acoustics; 3, Books and Bibliographies; 4, Ear and Hearing; 5, Applied Acoustics. Instruments and Apparatus; 6, Musical Instruments and Music; 7, Noise; 9, Speech and Singing; 10, Supersonics; 11, Waves and Vibrations. Each of these sections is further divided into a considerable number of decimally numbered subjects, which are listed below under the heading, "Classification of Subjects." Each subject is divided into three parts entitled Papers, Subtitles, and Abstracts. Under Papers will be found the original titles of all the papers appearing in the journal on that subject. Under Abstracts are listed the titles of the papers presented at meetings. Since a great amount of valuable material appears in the journal in papers whose titles cannot fully describe all the subjects which the papers cover, many of the subtitles of papers have been indexed under the heading Subtitles. When subtitles covering the material did not appear in the paper, they were written; the captions of some of the figures were also included under this heading. Thus, while the Subtitles portion of the Index is informal, it is hoped that it will increase the probability of finding the desired information quickly.

References on most subjects can be located immediately by a logical use of the Classification of Subjects below. In case the reference sought is of an unusual character such that there is uncertainty as to the subject under which it might have been classified, this can usually be found quite quickly by the process of eliminating the sections and subjects under which it is quite improbable that it might have been listed. In case of doubt, a title has often been listed under a number of subjects. As an example of the direct approach, suppose you wish to find data on the impedance of hair felt. On looking over the section headings it is seen that this comes under the heading Architectural Acoustics, and Subject, Measured Sound Absorption Coefficients. Under Subtitles we find a reference to hair felt, and on looking up this paper we find it entitled "Variable Boundary Impedance for Room Acoustics Investigations," which title of itself would not have suggested the presence of data on hair felt, thus demonstrating the value of having the index of Subtitles.

Obviously, the Author Index is more convenient than the Subject Index when one knows the name of the author of the paper in which he is interested.

The References to Contemporary Papers on Acoustics are identified in each issue by the same decimal numbers listed below, and may be consulted for references in other journals than our own. In Volume 12 these references will be found on pages 214, 313, 452 and 535.

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Absorption of noise in ventilating ducts. Hale J. Sabine. **12**: 53—1940

Sound absorption in rectangular ducts. Leo L. Beranek. **12**: 228—1940

Sound prevention mechanism of nonporous materials. Part I. Sadao Kawashima. **12**: 75—1940; Part II. **12**: 327—1941

Tone guard. Harry F. Olson. **12**: 374—1941

Transmission loss of nonporous plate having multiple resonant points. Sadao Kawashima. **12**: 332—1941

SUBTITLES

Attenuation in db/ft. for six different sizes and shapes of ducts. Leo L. Beranek. **12**: 229—1940

Mechanical vibration of brick partition. Sadao Kawashima. **12**: 331—1941

ABSTRACTS

Absorption of noise in ventilating ducts. Hale J. Sabine. **12**: 465—1941

Attenuation of sound in ducts. Leo L. Beranek. **12**: 470—1941

Dependence of sound transmission measurements on microphone position. Albert London. **12**: 465—1941

Sound transmission in buildings. R. Fitzmaurice and William Allen (book review). **12**: 451—1941

Transmission of sound through single and double glass surfaces. L. Renault. (Rev. d'Acoustique **8**, 12 (1939)). **12**: 208—1940

2.10 Measurements of Sound Transmission (see also 2.7 and 2.9)

SUBTITLES

Attenuation of single glasses of various thicknesses. L. Renault. (Rev. d'Acoustique **8**, 12 (1939)). **12**: 209—1940

Attenuation of various double glasses. L. Renault. (Rev. d'Acoustique **8**, 12 (1939)). **12**: 210—1940

Transmission loss of a glass plate. Sadao Kawashima. **12**: 79—1940; 333—1941

Transmission loss of a plaster plate. Sadao Kawashima. **12**: 80—1940

Transmission loss of concrete wall. Sadao Kawashima. **12**: 330—1941

Transmission loss of gypsum plaster. Sadao Kawashima. **12**: 331—1941

Transmission loss of thin, flexible rubber. Sadao Kawashima. **12**: 329—1941

3. Books and Bibliographies

3.1 Book Reviews

Acoustic air-jet generator. Julius Hartmann. **12**: 213—1940; 533—1941

Einfuhrung in die Akustik. Ferdinand Trendelenberg. **12**: 312—1940

Elements of acoustical engineering. Harry F. Olson. **12**: 312—1940

Mechanism of the human voice. Robert Curry. **12**: 533—1941

Psychology of music. Max Schoen. **12**: 451—1941

Sound. E. G. Richardson. Third edition. **12**: 451—1941

Sound transmission in buildings. R. Fitzmaurice and William Allen. **12**: 451—1941

Vowel sounds in poetry; their music and tone colour. M. M. Macdermott. **12**: 451—1941

3.2 Bibliographies

Acoustical investigations of Joseph Henry as viewed in 1940. Wilbert F. Snyder. **12**: 58—1940

Review of acoustical patents. Herbert A. Erf. **12**: 456, 537—1941

4. Ear and Hearing

4.1 General, Unclassified

PAPERS

Intensive difference limen in audition. Forrest L. Dimmick and Ruth M. Olson. **12**: 517—1941

Three mechanisms of hearing by electrical stimulation. R. Clark Jones, S. S. Stevens and M. H. Lurie. **12**: 281—1940

ABSTRACT

Musical ear. Ll. S. Lloyd (book review). **12**: 451—1941

4.4 Deafness

PAPERS

Characteristics and distribution of impaired hearing in the population of the United States. Willis C. Beasley. **12**: 114—1940

4.4 Deafness (continued)

Correlation between hearing loss measurements by air conduction on eight tones. Willis C. Beasley. **12**: 104—1940

SUBTITLE

Percentage of people in the age range, 10–59, having hearing loss greater than any given value. J. C. Steinberg, H. C. Montgomery and M. B. Gardner. **12**: 298—1940

ABSTRACTS

Relief of conduction deafness in progressive deafness. Emanuel M. Josephson. **12**: 468—1941

Roaring tinnitus and deafness due to vitamin E deficiency. Emanuel M. Josephson. **12**: 468—1941

4.5 Instruments Relating to Hearing

PAPER

Correlation between hearing loss measurements by air conduction on eight tones. Willis C. Beasley. **12**: 104—1940

ABSTRACTS

Consideration of audiometers and hearing aids. Howard A. Carter. **12**: 475—1941

Performance characteristics of hearing aids. F. F. Romanow. **12**: 475—1941

4.6 Loudness, Threshold Determinations

PAPERS

Intensive difference limen in audition. Forrest L. Dimmick and Ruth M. Olson. **12**: 517—1941

Results of the World's Fair hearing tests. J. C. Steinberg, H. C. Montgomery and M. B. Gardner. **12**: 291—1940

SUBTITLES

Percentage of people in the age range, 10–59, having hearing loss greater than any given value. J. C. Steinberg, H. C. Montgomery and M. B. Gardner. **12**: 298—1940

Thresholds for the age group 10–59. J. C. Steinberg, H. C. Montgomery and M. B. Gardner. **12**: 300—1940

ABSTRACTS

Bone conduction threshold measurements: Effects of occlusion and masking devices. N. A. Watson and R. S. Gales. **12**: 474—1941

Normal hearing in the general population as measured on seventeen Western Electric 2A audiometers. Willis C. Beasley. **12**: 468—1941

4.7 Masking

PAPER

Masking effects in practical instrumentation and orchestration. Abe Pepinsky. **12**: 405—1941

ABSTRACT

Masking effects in practical instrumentation and orchestration. Abe Pepinsky. **12**: 472—1941

4.10 Subjective Tones

PAPER

Interference of tones in the cochlea. Ernest Glen Wever, Charles W. Bray and Merle Lawrence. **12**: 268—1940

ABSTRACTS

Combination tones: Their nature and origin in the auditory mechanism. E. G. Wever, C. W. Bray and M. Lawrence. **12**: 468—1941

Roaring tinnitus and deafness due to vitamin E deficiency. Emanuel M. Josephson. **12**: 468—1941

4.11 Theories of Hearing

PAPERS

Elementary quantity of sound perception. Samuel Lifshitz. **12**: 526—1941

Three mechanisms of hearing by electrical stimulation. R. Clark Jones, S. S. Stevens and M. H. Lurie. **12**: 281—1940

5. Applied Acoustics. Instruments and Apparatus

5.1 General, Unclassified

ABSTRACT

Properties of linear systems used in vibration measuring instruments. John D. Trimmer. **12**: 461—1941

5.3 Acoustical Impedance Measurement (see also 11.4)

PAPERS

Precision measurement of acoustic impedance. Leo L. Beranek. **12**: 3—1940

Variable boundary impedance for room acoustics investigations. Richard H. Bolt and Richard L. Brown. **12**: 31—1940

5.4 Analyzers and Filters. Acoustic Filters. Oscillographs (see also 5.15)

PAPERS

Analysis of pulses by means of the harmonic analyzer. Robert S. Shankland. **12**: 383—1941

Elastic wave filtration in nonhomogeneous media. R. B. Lindsay. **12**: 378—1941

Transmission of sound through parallel conduits. L. W. Labaw. **12**: 232—1940

ABSTRACT

Filter networks in which corresponding elements of successive sections are changed by a constant factor. Jacques Brillouin. (Rev. d'Acoustique **8**, 79 (1939)). **12**: 207—1940

5.7 Frequency Standards. Frequency Measuring and Recording Instruments

PAPERS

Further applications of our direct-reading pitch and intensity recorder. Jûichi Obata and Ryûji Kobayashi. **12**: 188—1940; Corrigenda. 449—1941

Measurements of orchestral pitch. O. J. Murphy. **12**: 395—1941

Method of measuring audiofrequencies. Don Lewis and Paul E. Griffith. **12**: 412—1941

ABSTRACTS

Method of measuring audiofrequencies. Don Lewis and Paul E. Griffith. **12**: 471—1941

Recording of small pitch-variations. M. Grützmacher and W. Lottermoser. (Akustische Zeits. **5**, 1 (1940)). **12**: 309—1940

5.8 Loudspeakers, Horns (see also 5.13 and 5.17)

PAPER

Power transmission loss in exponential horns and pipes with wall absorption. William D. Phelps. **12**: 68—1940

5.8 Loudspeakers, Horns (see also 5.13 and 5.17) (continued)

ABSTRACTS

Apparatus for measuring the total sound power radiated by small sources. R. L. Hanson and E. M. Boardman. **12**: 461—1941

Comparison between piezoelectric and electromagnetic coupling. Karl S. Van Dyke. **12**: 461—1941

Generalized plane wave horn theory. V. Salmon. **12**: 473—1941

Method of measuring the total output of speakers. Darrell B. Green. **12**: 461—1941

Power transmission loss in exponential horns and pipes with wall absorption. William D. Phelps. **12**: 461—1941

System concept in electroacoustical systems. Hugh S. Knowles. **12**: 473—1941

5.9 Microphones, Vibration Microphones, and Microphone Calibration Equipment

PAPERS

Absolute measurement of sound without a primary standard. W. R. MacLean. **12**: 140—1940

Absolute noise level of microphones. Definition proposed for discussion. H. G. Baerwald. **12**: 131—1940

Absolute pressure calibration of microphones. Richard K. Cook. **12**: 415—1941

New microphone providing uniform directivity over an extended frequency range. R. N. Marshall and W. R. Harry. **12**: 481—1941

Properties of linear systems used in vibration measuring instruments. John D. Trimmer. **12**: 127—1940

Shock waves in air and characteristics of instruments for their measurement. L. Thompson. **12**: 198—1940

SUBTITLES

Capacity of crystal microphones as a function of temperature. Paul Huber and John M. Whitmore. **12**: 170—1940

Indication of sound level meter due to the magnetic pick-up of dynamic microphone in a field of 1 gauss, r.m.s. Paul Huber and John M. Whitmore. **12**: 170—1940

Open circuit output of a dynamic microphone as a function of temperature. Paul Huber and John M. Whitmore. **12**: 170—1940

Tourmaline microphone. Richard K. Cook. **12**: 415—1941

ABSTRACTS

Absolute calibration of microphones. Richard K. Cook. **12**: 462—1941

Absolute noise level of microphones—a definition proposed for discussion. H. G. Baerwald. **12**: 461—1941

Absolute sound pressure measurements with tourmaline. L. J. Sivian. **12**: 462—1941

Acoustic wattmeter, an instrument for measuring sound energy flow. C. W. Clapp and F. A. Firestone. **12**: 473—1941

Comparison between piezoelectric and electromagnetic coupling. Karl S. Van Dyke. **12**: 461—1941

Ultramicrometer as a vibration meter. J. C. Hubbard and Philip Hambleton. **12**: 468—1941

Uniphase uni-directional microphones. Benjamin B. Bauer. **12**: 473—1941

5.10 Navigational Instruments. Depth and Altitude Finding Instruments. Geophysical Prospecting. Under-Water Sound. Submarine Detectors

ABSTRACTS

Some acoustical phenomena in the Antarctic. Thomas C. Poulter. **12**: 474—1941

Sono radio buoys. Herbert Grove Dorsey. **12**: 466—1941

5.11 Oscillators

SUBTITLE

Stable oscillator. O. J. Murphy. **12**: 396—1941

5.13 Public Address Systems and Sound Picture Installations (see also 5.8 and 5.16)

PAPERS

Control of acoustic conditions on the concert stage. Harold Burris-Meyer. **12**: 335—1941

Sound control apparatus for the theater. Harold Burris-Meyer. **12**: 122—1940

SUBTITLE

Offstage loudspeaker as aid to singer. Harold Burris-Meyer. **12**: 335—1941

ABSTRACTS

Control of acoustic conditions on the concert stage. Harold Burris-Meyer. **12**: 470—1941

Sound control apparatus for the theater. Harold Burris-Meyer. **12**: 465—1941

5.14 Rayleigh Disks

PAPER

Sound pressure on spheres. Francis E. Fox. **12**: 147—1940

5.15 Sound Level Meters. Level Recorders. Sound Pressure Measurement (see also 5.4 and 7.1)

PAPERS

Sound level meter performance. J. E. Tweeddale. **12**: 421—1941

Sound level meters from the user's viewpoint. Paul Huber and John M. Whitmore. **12**: 167—1940

Sound measurement objectives and sound level meter performance. J. M. Barstow. **12**: 150—1940

SUBTITLES

Capacity of crystal microphones as a function of temperature. Paul Huber and John M. Whitmore. **12**: 170—1940

Free field frequency responses and tolerances for sound level meters. J. M. Barstow. **12**: 152—1940

Indication of sound level meter due to the magnetic pick-up of dynamic microphone in a field of 1 gauss, r.m.s. Paul Huber and John M. Whitmore. **12**: 170—1940

Open circuit output of a dynamic microphone as a function of temperature. Paul Huber and John M. Whitmore. **12**: 170—1940

Responses to tones of short duration. J. M. Barstow. **12**: 161—1940

Rules of combination in rectifiers. J. M. Barstow. **12**: 164—1940

5.15 Sound Level Meters. Level Recorders. Sound Pressure Measurement (see also 5.4 and 7.1) (continued)

PAPERS

Variation of sound level meter sensitivity with applied voltage. Paul Huber and John M. Whitmore. **12**: 169—1940

ABSTRACTS

Acoustic wattmeter, an instrument for measuring sound energy flow. C. W. Clapp and F. A. Firestone. **12**: 473—1941

Sound level meter performance. J. E. Tweeddale. **12**: 462—1941

Sound measurement objectives and sound level meter performance. J. M. Barstow. **12**: 463—1941

Sound measuring instruments from the user's viewpoint. Paul Huber. **12**: 462—1941

5.16 Sound Recording and Reproducing (see also 5.13)

PAPERS

Notes on phonograph pick-ups for lateral-cut records. Lawrence Fleming. **12**: 366—1941

Theory of tracing distortion in sound reproduction from phonograph records. W. D. Lewis and F. V. Hunt. **12**: 348—1941

Tone guard. Harry F. Olson. **12**: 374—1941

ABSTRACTS

Approximate theory of tracing distortion in sound reproduction from phonograph records. Willard D. Lewis. **12**: 462—1941

New optical method of measurement for phonograph recordings. Gerhard Buchmann and Erwin Meyer. (E. N. T. **7**, 147–152 (1930)). **12**: 303—1940

Phonograph reproducer design. F. V. Hunt and J. A. Pierce. **12**: 474—1941

Tone guard. Harry F. Olson. **12**: 474—1941

5.17 Telephone Receivers (see also 5.8)

PAPERS

Room noise at subscribers' telephone locations. D. F. Seacord. **12**: 183—1940

Room noise spectra at subscribers' telephone locations. Daniel F. Hoth. **12**: 499—1941

ABSTRACT

Room noise spectra at subscribers' telephone locations. D. F. Hoth. **12**: 475—1941

6. Musical Instruments and Music

6.1 General, Unclassified

PAPERS

Control of acoustic conditions on the concert stage. Harold Burris-Meyer. **12**: 335—1941

Further applications of our direct-reading pitch and intensity recorder. Jûichi Obata and Ryûji Kobayashi. **12**: 188—1940

Masking effects in practical instrumentation and orchestration. Abe Pepinsky. **12**: 405—1941

Measurements of orchestral pitch. O. J. Murphy. **12**: 395—1941

Note on just intonation. Correction. Llewelyn S. Lloyd. **12**: 206—1940

Trends in acceptable tone quality as evidenced in modern musical instruments. Abe Pepinsky. **12**: 403—1941

SUBTITLE

Offstage loudspeaker as aid to singer. Harold Burris-Meyer. **12**: 335—1941

ABSTRACTS

Acoustical bases of music theory and composition. Lloyd Loar. **12**: 473—1941

Masking effects in practical instrumentation and orchestration. Abe Pepinsky. **12**: 472—1941

Musical Ear. Ll. S. Lloyd (book review). **12**: 451—1941

Psychology of music. Max Schoen (book review). **12**: 451—1941

Trends in acceptable tone quality as evidenced in modern musical instruments. Abe Pepinsky. **12**: 472—1941

6.3 Brass

ABSTRACTS

Experiments in the analysis of a mechanically produced cornet tone. Daniel W. Martin. **12**: 476—1941

Mechanical playing device for brass wind instruments. Daniel W. Martin. **12**: 467—1941

6.5 Organs (see also 6.9)

PAPERS

Effect of wall materials on the steady-state acoustic spectrum of flue pipes. C. P. Boner and R. B. Newman. **12**: 83—1940

End corrections of organ pipes. Arthur Taber Jones. **12**: 387—1941

Problems in the analysis of the tone of an open organ pipe. Paul A. Northrop. **12**: 90—1940

ABSTRACTS

Experiments connected with end corrections for organ pipes. Arthur Taber Jones. **12**: 467—1941

Problems in the analysis of the tone of an open organ pipe. P. A. Northop. **12**: 467—1941

6.6 Pianos

PAPER

Problem of a stringing scale for small vertical pianofortes. William Braid White. **12**: 409—1941

ABSTRACT

On the problem of stringing scales for very small pianoforte. William Braid White. **12**: 472—1941

6.7 Violin Family

PAPER

Improved techniques in the study of violins. R. B. Watson, W. J. Cunningham and F. A. Saunders. **12**: 399—1941

ABSTRACTS

Improved techniques in the study of violins. R. B. Watson, W. J. Cunningham and F. A. Saunders. **12**: 471—1941

Physical properties of wood for violin construction. R. B. Abbott and G. H. Purcell. **12**: 471—1941

6.8 Wood Winds

PAPER

Mode of vibration of a clarinet reed. C. S. McGinnis and C. Gallagher. **12**: 529—1941

6.8 Wood Winds (continued)

ABSTRACTS

Analysis of tone production factors in flute playing. Arnold Small and William Waldrop. **12**: 472—1941

Investigation of "block" flutes. A. von Lüpke. (Akustische Zeits. **5**, 39 (1940)). **12**: 307—1940

6.9 Electronic Musical Instruments (see also 6.5)

ABSTRACT

Three electrical musical instruments. Laurens Hammond. **12**: 473—1941

7. Noise

7.1 General, Unclassified (see also 5.15)

PAPERS

Noise tremor due to traffic. From an engineer's point of view. R. K. Bernhard. **12**: 338—1941

Room noise at subscribers' telephone locations. D. F. Seacord. **12**: 183—1940

ABSTRACT

Room noise at subscribers' telephone locations. D. F. Seacord. **12**: 465—1941

7.4 City Noise

ABSTRACT

Noise—tremor due to traffic. R. K. Bernhard. **12**: 475—1941

7.5 Frequency Analyses of Noise

ABSTRACT

Sound spectra of condenser discharges and pistol reports and applications in electroacoustic measurements. W. Weber. (Akustische Zeits. **4**, 373 (1939)). **12**: 210—1940

7.6 Noise in Buildings (see also 2.2)

PAPERS

Absorption of noise in ventilating ducts. Hale J. Sabine. **12**: 53—1940

Noise tremor due to traffic. From an engineer's point of view. R. K. Bernhard. **12**: 338—1941

Room noise at subscribers' telephone locations. D. F. Seacord. **12**: 183—1940

Room noise spectra at subscribers' telephone locations. Daniel F. Hoth. **12**: 499—1941

Sound absorption in rectangular ducts. Leo L. Beranek. **12**: 228—1940

SUBTITLE

Average spectrum of room noise in offices. Daniel F. Hoth. **12**: 499—1941

ABSTRACT

Room noise spectra at subscribers' telephone locations. D. F. Hoth. **12**: 475—1941

7.7 Machinery Noise

PAPER

Propeller rotation noise due to torque and thrust. Arthur F. Deming. **12**: 173—1940

ABSTRACTS

Acoustical work in aircraft engine test houses. Martin J. Brennan, Frank H. Janke, Jr. and Victor Jacobson. **12**: 463—1941

Ball bearing noise and vibration. W. T. Buhl. **12**: 475—1941

9. Speech and Singing

9.1 General, Unclassified

PAPER

Mechanism of the human voice. Robert Curry (book review). **12**: 533—1941

Starting characteristics of speech sounds. R. O. Drew and E. W. Kellogg. **12**: 95—1940

ABSTRACTS

Application of acoustical analysis to linguistic problems. J. M. Cowan. **12**: 474—1941

Investigations of vocal cord vibration. W. Trendelenburg and H. Wullstein. (Sitz. Preuss. Akad. Wiss. Phys. Math. Klasse **21**, 399—426 (1935)). **12**: 306—1940

Vowel sounds in poetry: Their music and tone colour. M. M. Macdermott (book review). **12**: 451—1941

9.8 Speech Power. Singing Voice Power

PAPER

Starting characteristics of speech sounds. R. O. Drew and E. W. Kellogg. **12**: 95—1940

10. Supersonics (Ultrasonics)

10.1 General, Unclassified

ABSTRACT

Ultrasonic study of phase transition near the critical point. J. C. Hubbard and C. M. Herget. **12**: 467—1941

10.2 Light Affected by Supersonic Waves

PAPER

Ultrasonics and elasticity. H. F. Ludloff. **12**: 193—1940

10.4 Gases, Supersonic Velocities, Dispersion, and Absorption (see also 11.3)

PAPERS

Absorption of sound in carbon dioxide. Robert W. Leonard. **12**: 241—1940

Absorption of sound in CO_2, N_2O, COS, and in CS_2, containing added impurities. V. O. Knudsen and E. Fricke. **12**: 255—1940. Errata. **12**: 449—1941

Absorption of sound in five triatomic gases. Edwin F. Fricke. **12**: 245—1940

SUBTITLE

Sound absorption coefficients of CO_2, N_2O, COS, CS_2 and SO_2. Edwin F. Fricke. **12**: 245—1940

ABSTRACTS

Absorption of sound in CO_2, N_2O, COS, and in CS_2 containing added impurities. V. O. Knudsen and E. Fricke. **12**: 466—1941

Effects of water vapor on supersonic dispersion in CO_2. D. Telfair. **12**: 466—1941

Improved apparatus for the direct measurement of the absorption of sound in gases. Robert W. Leonard. **12**: 466—1941

10.5 Liquids, Supersonic Velocities, Dispersion, and Absorption

PAPERS

Ultrasonic absorption and velocity measurements in numerous liquids. Gerald W. Willard. **12**: 438—1941

Ultrasonic absorption in water. Francis E. Fox and George D. Rock. **12**: 505—1941

SUBTITLE

Errors in the measurement of absorption in liquids. Francis E. Fox and George D. Rock. **12**: 505—1941

10.6 Solids, Supersonic Velocities, Dispersion, and Absorption

PAPER

Ultrasonics and elasticity. H. F. Ludloff. **12**: 193—1940

ABSTRACT

Ultrasonics and elasticity. H. F. Ludloff. **12**: 467—1941

10.7 Physical Effects of Supersonic Waves

ABSTRACT

Ultrasonic study of phase transition near the critical point. J. C. Hubbard and C. M. Herget. **12**: 467—1941

11. Waves and Vibrations

11.3 Propagation of Sound. Absorption During Propagation. Velocity of Sound (see also 10.4)

PAPERS

Influence of certain atmospheric conditions upon sound transmission at short ranges. Halson Vashon Eagleson. **12**: 427—1941

Sound velocities in gases under different pressures. R. C. Colwell and L. H. Gibson. **12**: 436—1941

ABSTRACTS

Propagation of sound in the atmosphere—time fluctuations in intensity. L. P. Delsasso and V. O. Knudsen. **12**: 471—1941

Some acoustical phenomena in the Antarctic. Thomas C. Poulter. **12**: 474—1941

11.4 Radiation from Vibrating Objects. Acoustical Impedance. Mechanical Impedance (see also 5.3)

PAPERS

Acoustic impedance and sound absorption. Philip M. Morse, Richard H. Bolt and Richard L. Brown. **12**: 217—1940

11.5 Sounds of Finite Amplitude

PAPERS

Physical analysis of distortion produced by the nonlinearity of the medium. L. J. Black. **12**: 266—1940

Shock waves in air and characteristics of instruments for their measurement. L. Thompson. **12**: 198—1940

Sound pressure on spheres. Francis E. Fox. **12**: 147—1940

ABSTRACTS

Method for producing extremely strong standing sound waves in air. Hermann Oberst. (Akustische Zeits. **5**, 27 (1940)). **12**: 308—1940

Shock waves in air and characteristics of instruments for their measurement. L. Thompson. **12**: 463—1941

11.6 Sound Transmission Through Tubes

PAPERS

Absorption of noise in ventilating ducts. Hale J. Sabine. **12**: 53—1940

Attenuation of sound in tubes. R. D. Fay. **12**: 62—1940

End corrections of organ pipes. Arthur Taber Jones. **12**: 387—1941

Power transmission loss in exponential horns and pipes with wall absorption. William D. Phelps. **12**: 68—1940

Propagation of sound in cylindrical tubes. Nathaniel Rochester. **12**: 511—1941

Sound absorption in rectangular ducts. Leo L. Beranek. **12**: 228—1940

ABSTRACTS

Absorption of noise in ventilating ducts. Hale J. Sabine. **12**: 465—1941

Attenuation of sound in ducts. Leo L. Beranek. **12**: 470—1941

11.7 Theory of Waves and Vibrating Systems

PAPERS

Absolute measurement of sound without a primary standard. W. R. MacLean. **12**: 140—1940

Analysis of pulses by means of the harmonic analyzer. Robert S. Shankland. **12**: 383—1941

Elastic wave filtration in nonhomogeneous media. R. B. Lindsay. **12**: 378—1941

Properties of linear systems in vibration measuring instruments. John D. Trimmer. **12**: 127—1940

Sound pressure on spheres. Francis E. Fox. **12**: 147—1940

Symmetrical sand figures on circular plates. R. C. Colwell, J. K. Stewart and H. D. Arnett. **12**: 260—1940

Transmission of sound through parallel conduits. L. W. Labaw. **12**: 232—1940

ABSTRACTS

Analysis of pulses by means of the harmonic analyzer. Robert S. Shankland. **12**: 475—1941

System concept in electroacoustical systems. Hugh S. Knowles. **12**: 473—1941